

4.2.1.6 Biological Resources

Preferred Alternative: No Action Alternative

Under No Action, the Pu storage mission described in Section 2.2.1 would continue at Hanford. These activities would result in no appreciable change to current conditions of biological resources at Hanford as described in Section 3.2.6.

Upgrade Alternative

Upgrade Without Rocky Flats Environmental Technology Site Plutonium or Los Alamos National Laboratory Plutonium Subalternative

Modify Existing Fuels and Materials Examination Facility for Plutonium Storage

Modifying selected areas of the FMEF within the 400 Area at Hanford would cause minimal disturbance to biological resources. This is because all activities would involve existing structures and would take place within an area that is currently disturbed. Noise associated with modifying the FMEF could cause some temporary disturbance to wildlife, but this impact would be minimal because animals living adjacent to the current facility have already adapted to its presence. Water withdrawal would be through wells and would involve relatively minor volumes, so wetlands and aquatic resources would not be affected. Wastewater would be discharged to evaporation/infiltration ponds. Since the upgrade would take place within a developed area, impacts to threatened and endangered species would not be expected.

Construct New 200 West Area Facility for Plutonium Storage

A new Pu storage facility would be constructed within the protected area of the PFP in the 200 West Area of Hanford. Although new construction would be involved in this option, it will take place within an area of the 200 West Area that is currently disturbed. Impacts to biological resources would be expected to be minimal and similar to those described above for the modification of the FMEF.

Upgrade With All or Some Rocky Flats Environmental Technology Site Plutonium and Los Alamos National Laboratory Plutonium Subalternative

Modify Existing Fuels and Materials Examination Facility for Plutonium Storage

Upgrading with all or some RFETS and LANL materials would not be expected to change impacts to biological resources from those described above for the modification of the FMEF.

Construct New 200 West Area Facility for Plutonium Storage

Upgrading with all or some RFETS and LANL materials would not be expected to change impacts to biological resources from those described above for the new Pu storage facility.

Consolidation Alternative

Construct New Plutonium Storage Facility

Under this alternative, Pu would be consolidated in a new storage facility located adjacent to the 200 East Area. Impacts to terrestrial resources, wetlands, aquatic resources, and threatened and endangered species are discussed below.

Terrestrial Resources. Construction and operation of the consolidated Pu storage facility would disturb 58.5 ha (144 acres) of terrestrial habitat, or about 0.04 percent of Hanford. This includes areas on which plant facilities would be constructed, as well as areas revegetated following construction. Vegetation within the proposed location would be destroyed during land-clearing operations. The project site falls within the sagebrush/cheatgrass or Sandberg's bluegrass community. Sagebrush communities are well represented on Hanford, but they are relatively uncommon regionally because of widespread conversion of shrub-steppe habitats to agriculture. Disturbed areas are generally recolonized by cheatgrass, a nonnative species, at the expense of native plants.

Construction of the Pu storage facility would affect animal populations. Less mobile animals within the project area, such as reptiles and small mammals, would not be expected to survive. Construction activities and noise would cause larger mammals and birds in the construction and adjacent areas to move to similar habitat nearby. If the area to which they moved was below its carrying capacity, these animals would be expected to survive. However, if the area was already supporting the maximum number of individuals, the additional animals would compete for limited resources, which could lead to habitat degradation and eventual loss of the excess population. Nests and young animals living within the proposed location may not survive. The location would be surveyed as necessary for the nests of migrating birds prior to construction. Areas disturbed by construction, but not occupied by facility structures, would be of minimal value to wildlife because they would be maintained as landscaped areas.

Activities associated with facility operations, such as noise and human presence, could affect wildlife living immediately adjacent to the Pu storage facility. These disturbances may cause some species to move from the area. Disturbance to wildlife living adjacent to the facility would be minimized by preventing workers from entering undisturbed areas. Salt drift generated by mechanical draft cooling systems would be minimal, so impacts are not expected.

Wetlands. Construction and operation of the Pu storage facility would not affect wetlands since no wetlands exist near the proposed location. Due to the relatively small amount of water required during both construction and operation, existing intake structures would be used. It would not be necessary to disturb wetlands along the Columbia River. Construction- and operation-related discharges would be directed to evaporation ponds and, thus, would not impact wetlands. All wastewater discharges would be treated, as necessary, to meet NPDES permit requirements.

Aquatic Resources. Construction of a Pu storage facility at Hanford would not impact aquatic resources since there are no surface water bodies near the proposed location. Water requirements during both construction and operation would be met by existing site sources. Since new intake structures would not be required, direct disturbance of aquatic resources in the Columbia River would not occur. Water withdrawal during both construction and operation would represent a small percentage of the Columbia River's average flow and would have little effect on the flow of the river. Flow-related impacts to aquatic resources from impingement and entrainment impacts would be minimal and unlikely to affect fish populations in the Columbia River. In compliance with the *Anadromous Fish Conservation Act* (16 USC 757a et seq.), populations of anadromous fish species would be sustained, and their movement would be unobstructed by project construction and operation. All discharges would be to evaporation ponds, which would provide temporary aquatic habitat.

Threatened and Endangered Species. It is unlikely that federally listed threatened and endangered species would be affected by construction and operation of the Pu storage facility. However, this alternative would disturb 58.5 ha (144 acres) of sagebrush habitat. Sagebrush habitat is important nesting/breeding and foraging habitat for several State-listed and candidate species, such as the ferruginous hawk, loggerhead shrike, western burrowing owl, pygmy rabbit, western sage grouse, sage sparrow, and sage thrasher. Preactivity surveys would

be conducted as appropriate prior to construction to determine the presence of plant species or animal species in the area to be disturbed. Consultation with the USFWS and State agencies would be conducted at the site-specific level, as appropriate.

Collocation Alternative

Construct New Plutonium and Highly Enriched Uranium Storage Facilities

Under this alternative, Pu would be stored with HEU inventories in a new collocated storage facility located in the 200 East Area. Construction and operation of collocated storage facilities at Hanford would have similar, but somewhat greater, effects on biological resources as those described for the consolidated storage facility alone. Construction of the collocated storage alternative would disturb 89.5 ha (221 acres) of habitat.

Subalternative Not Including Strategic Reserve and Weapons Research and Development Materials

The exclusion of strategic reserve and weapons R&D materials would have almost the same effects to the Upgrade With All or Some RFETS and LANL Pu Subalternative, the Consolidation Alternative, and the Collocation Alternative. The size of facility would be similar and would not result in the reduction of disturbed habitat and fewer facility modifications and the potential impacts to biological resources would be similar. [Text deleted.]

Phaseout

The phaseout of Pu storage facilities at Hanford is not expected to affect biological resources, although increased human activity could temporarily disturb some wildlife species in the vicinity of the site.